

1/14

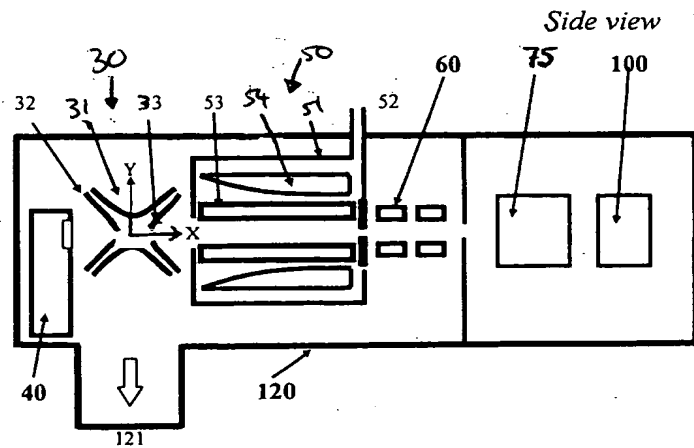
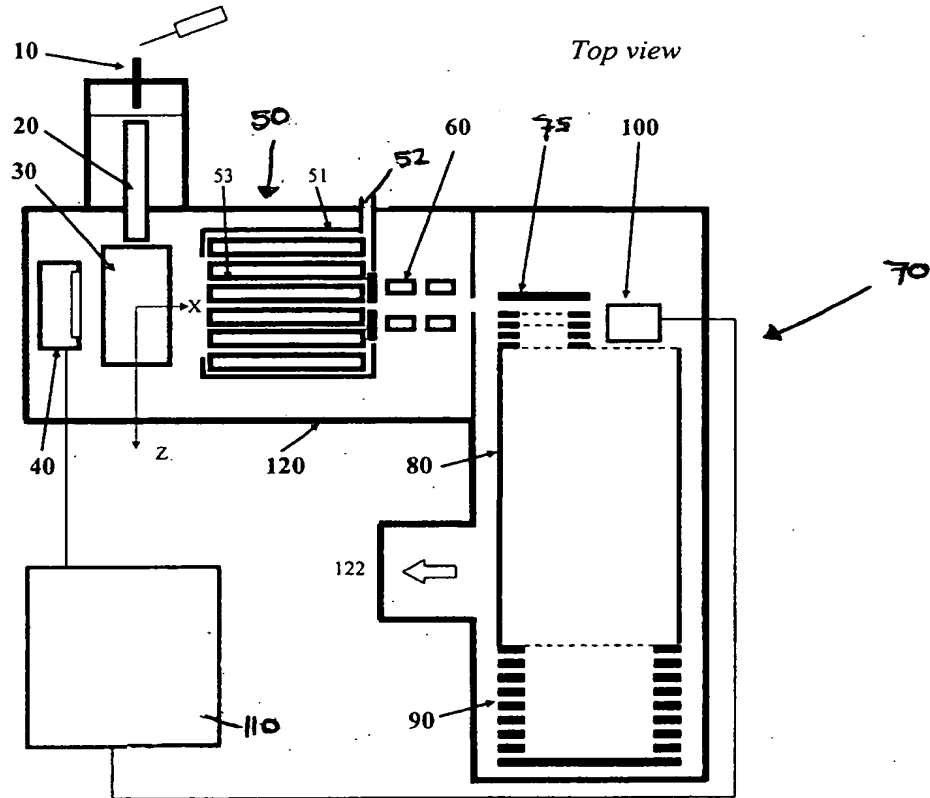


Fig. 1.

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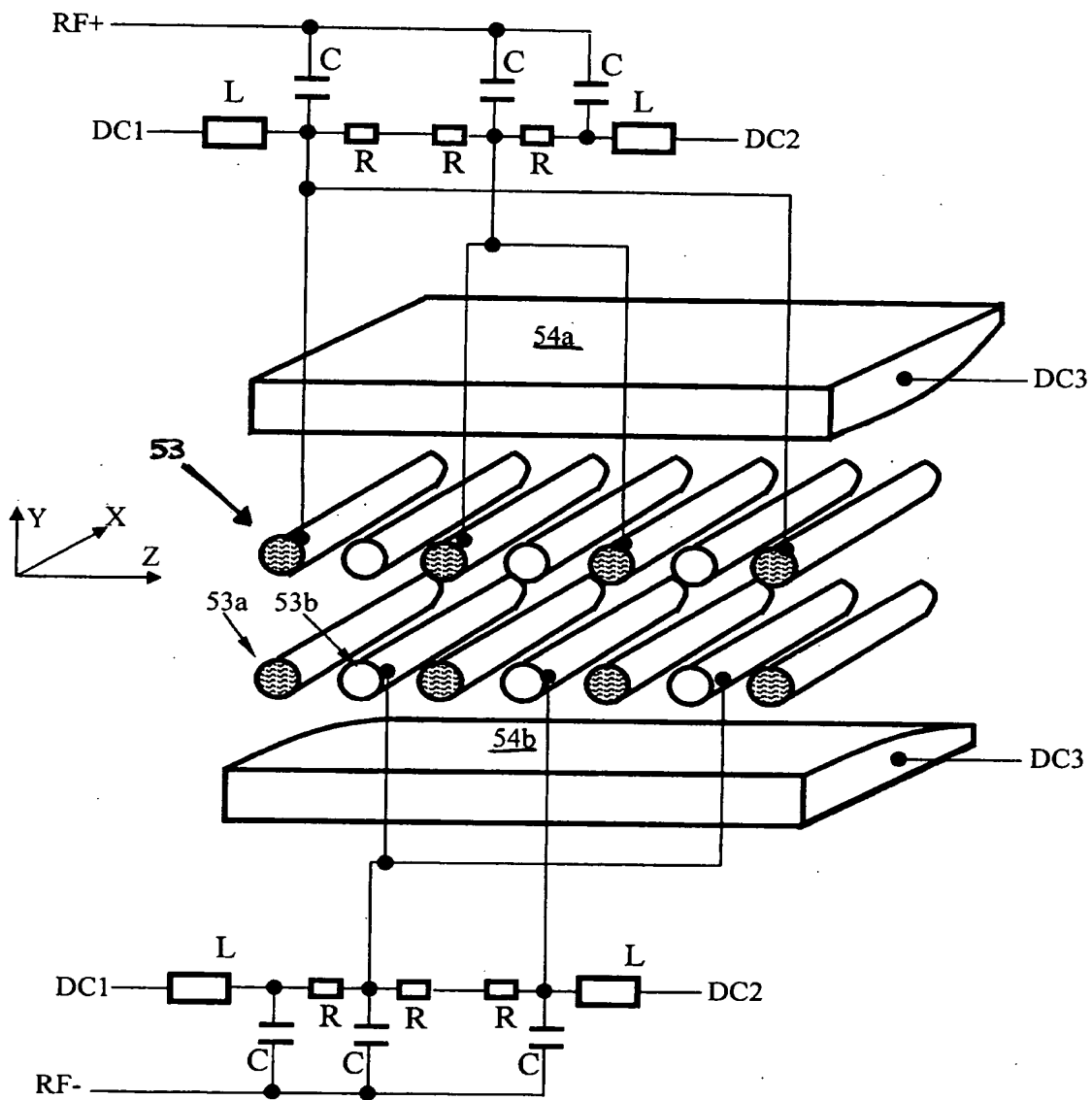


Fig. 2.

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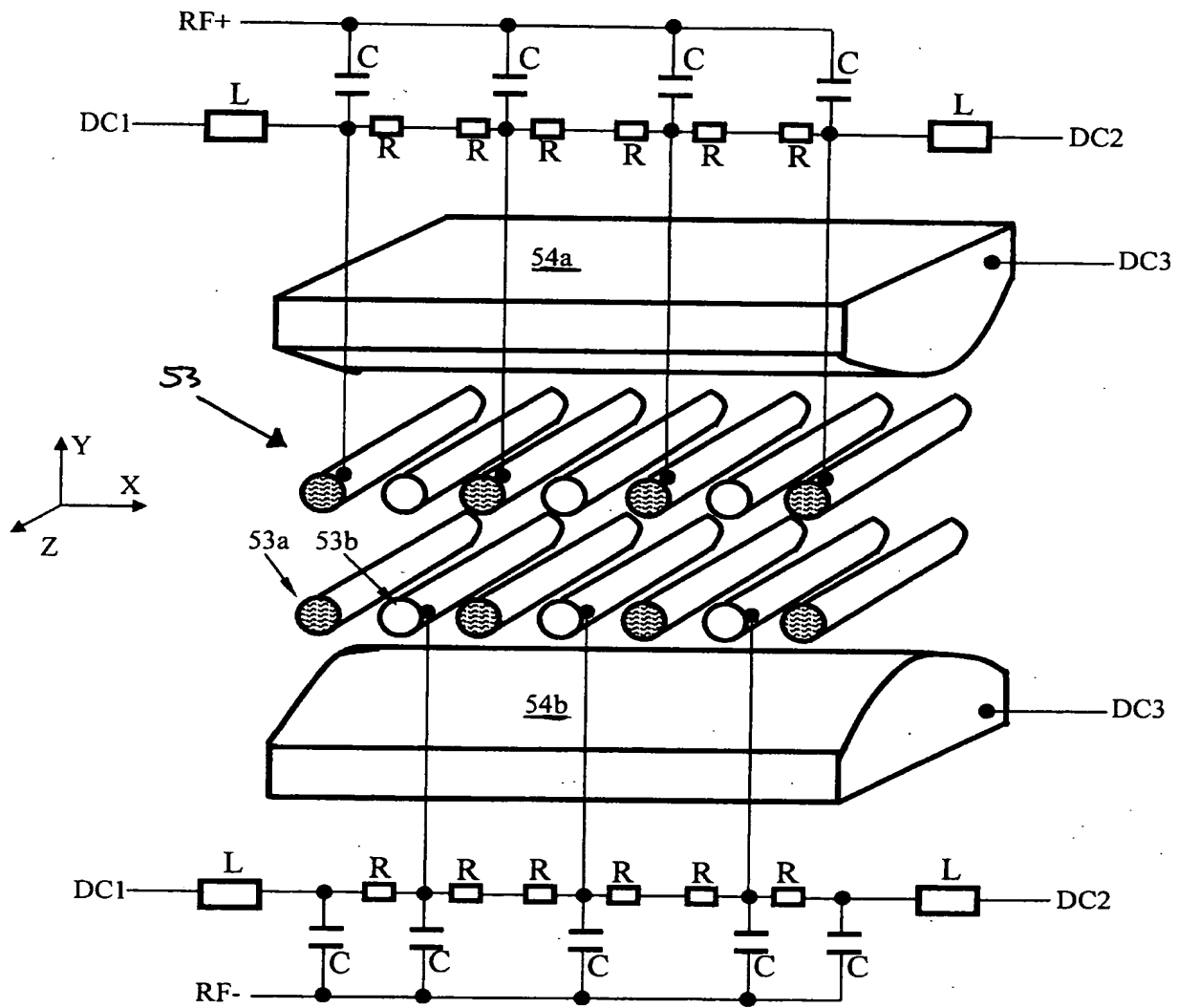


Fig. 3.

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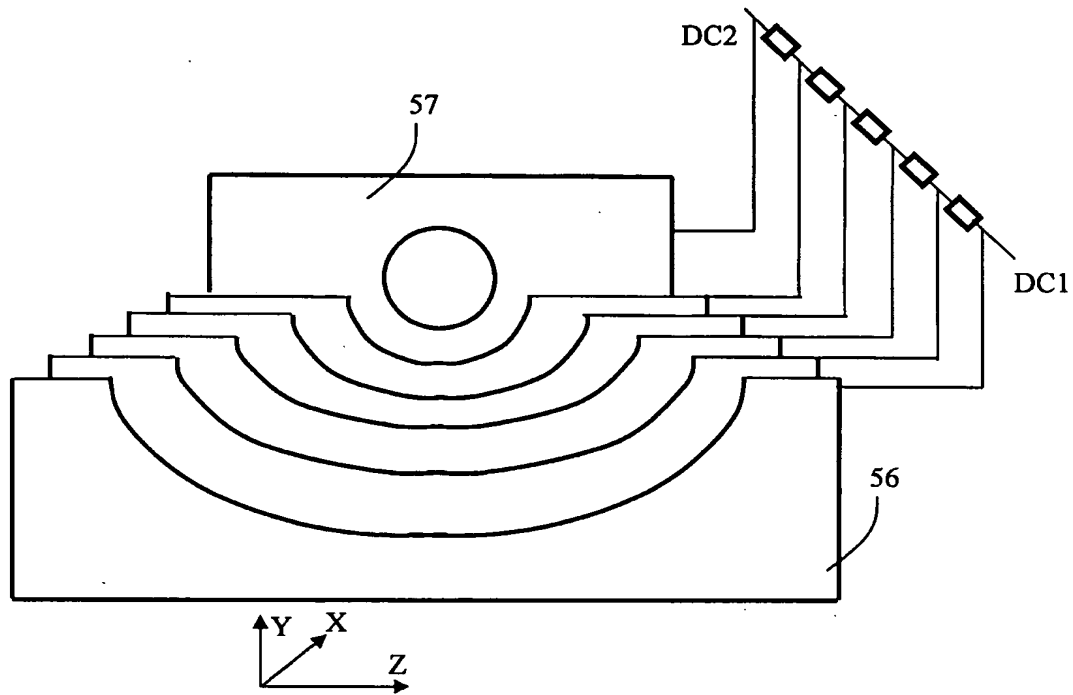


Fig. 4a.

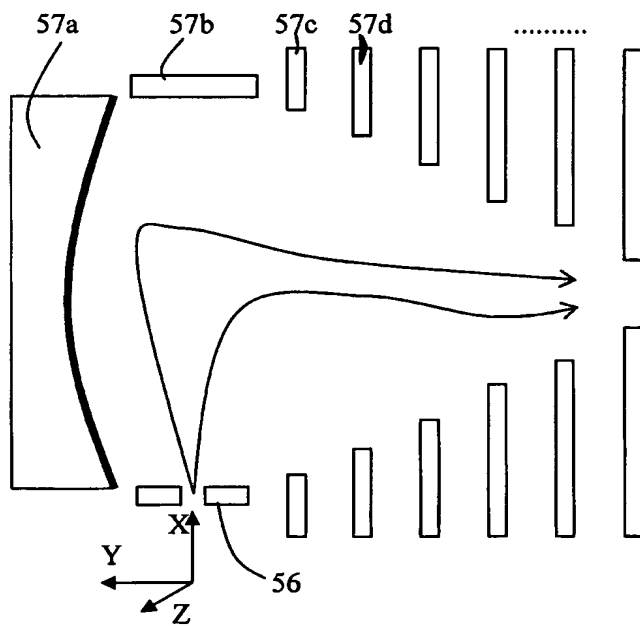


Fig. 4b.

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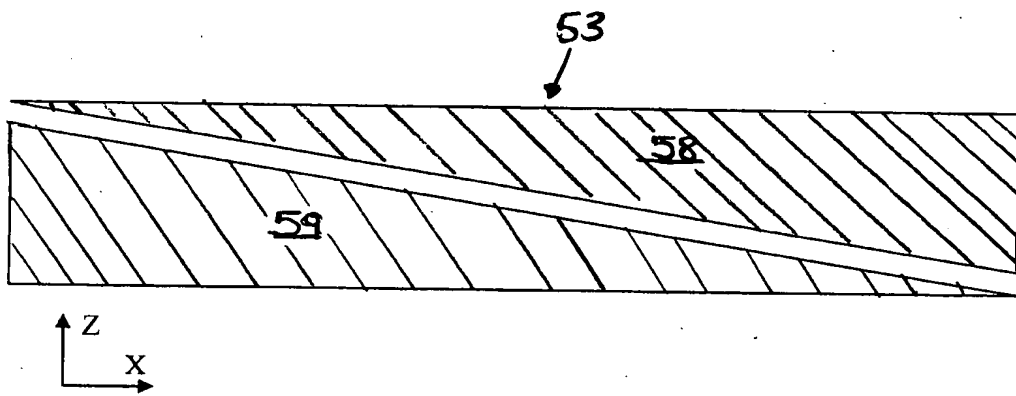


Fig. 5a

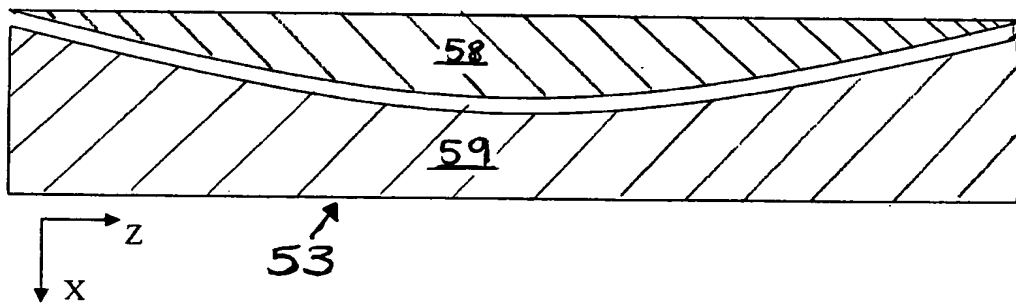


Fig. 5b

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Figure 6a

Partitioning of Rod Electrodes to Allow For X Field Gradient

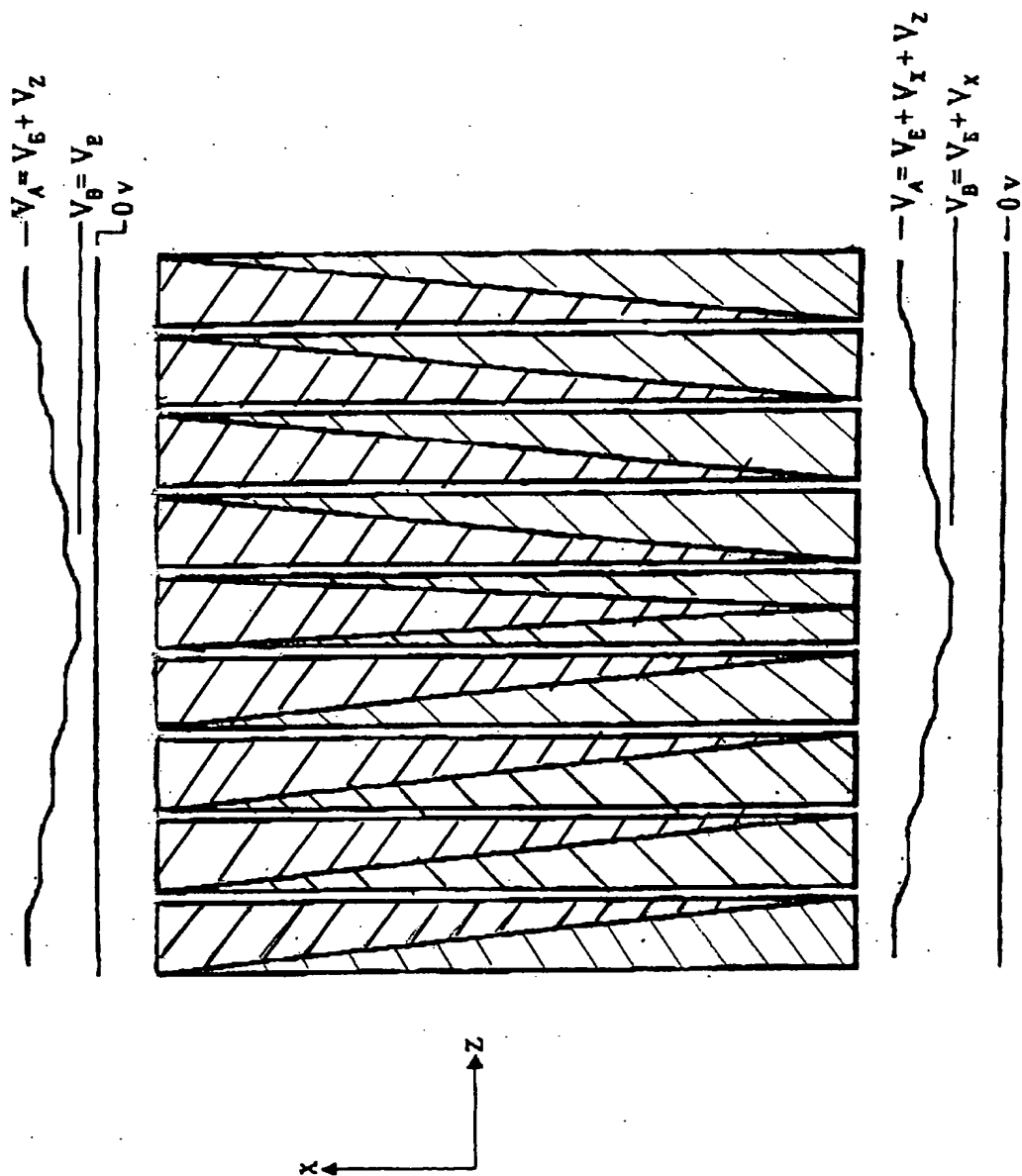
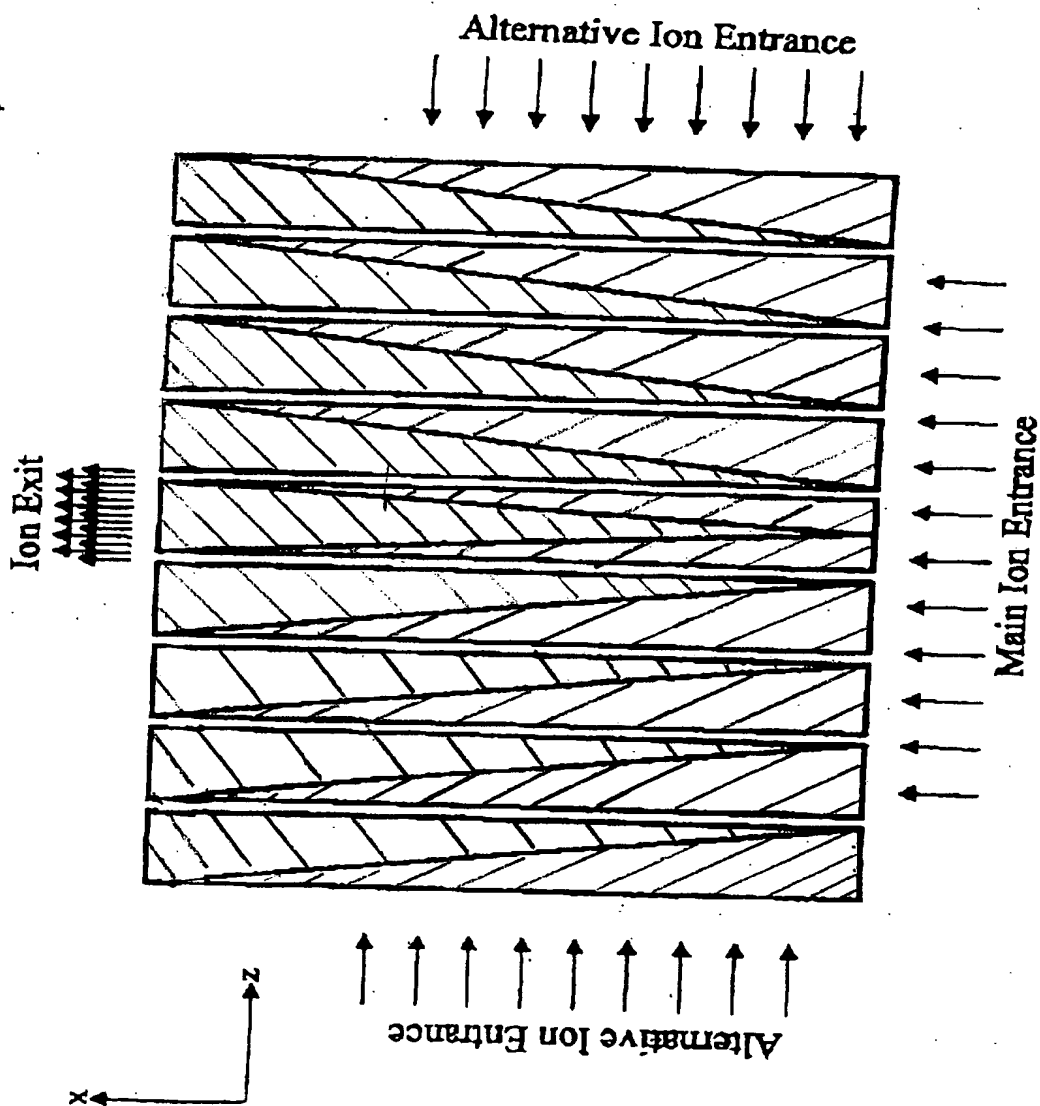


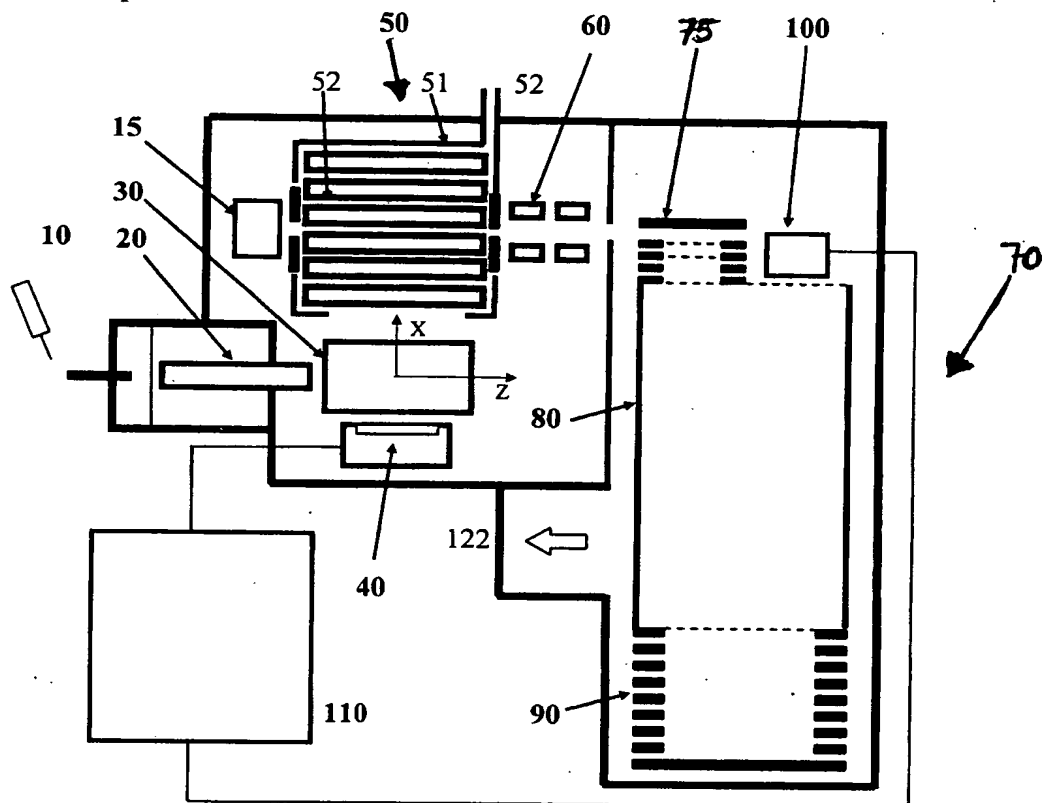
Figure 6b

Ion Entrance and Exit From Planar Ion Guide



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Top view



Side view

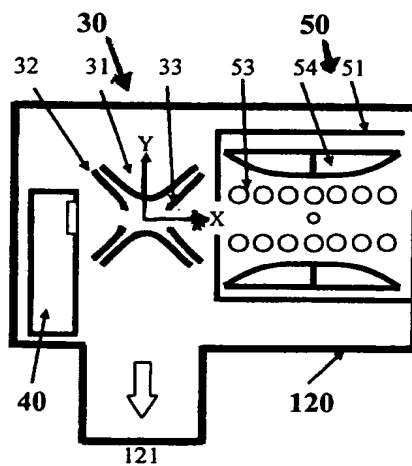


Fig. 7.

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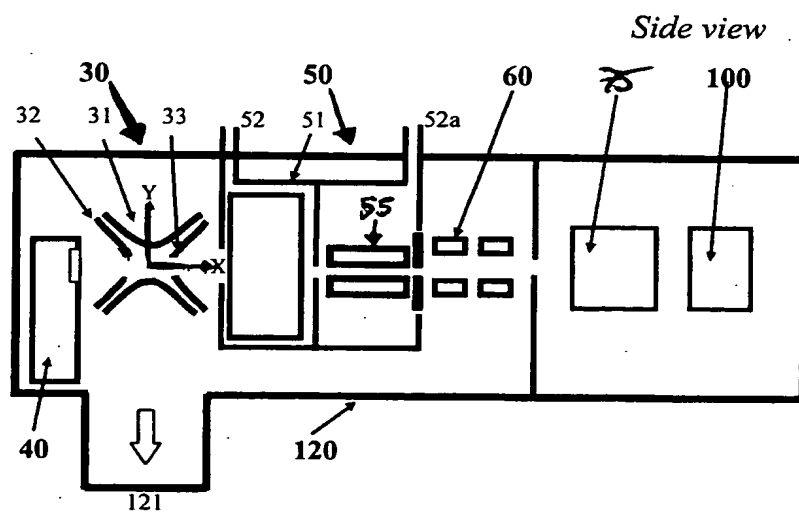
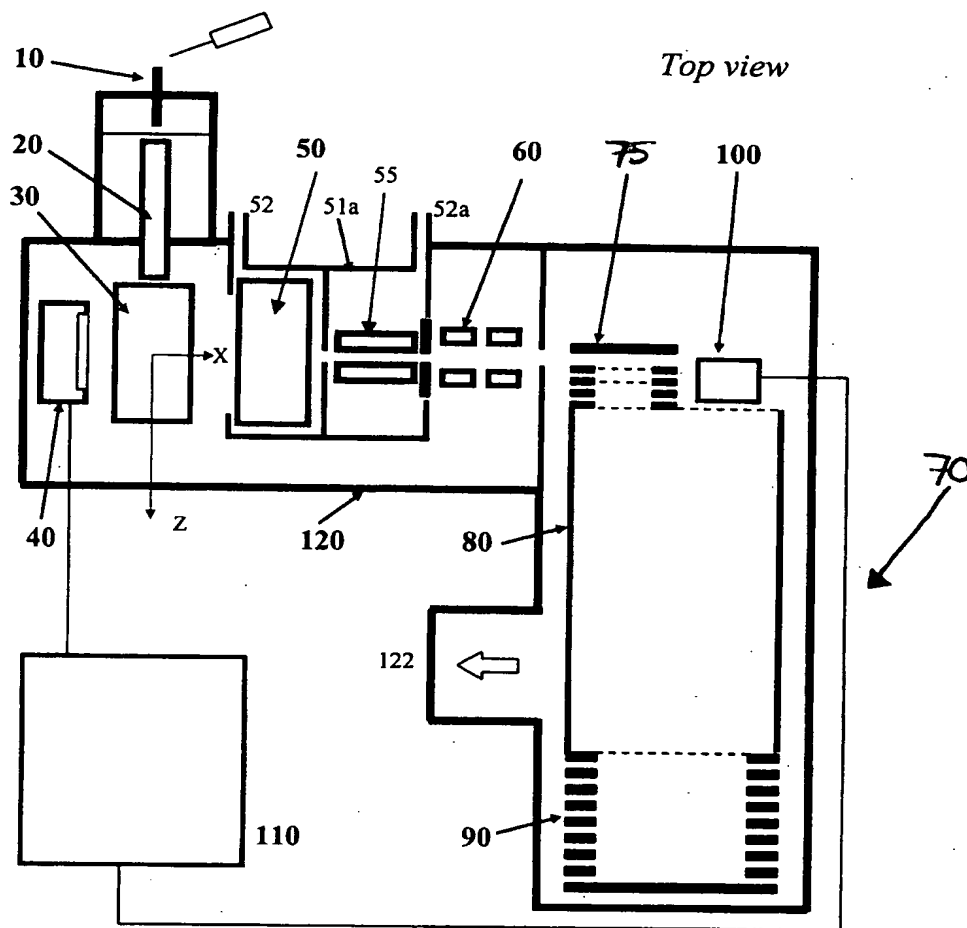


Figure 8

Figure 9

Conventional Quadrupole / Ion Trap
RF Generation / Control Circuitry

RF Amplitude

Detection Circuit

Inverted
output

From Detector
Capacitors

Multiplier/
Mixer

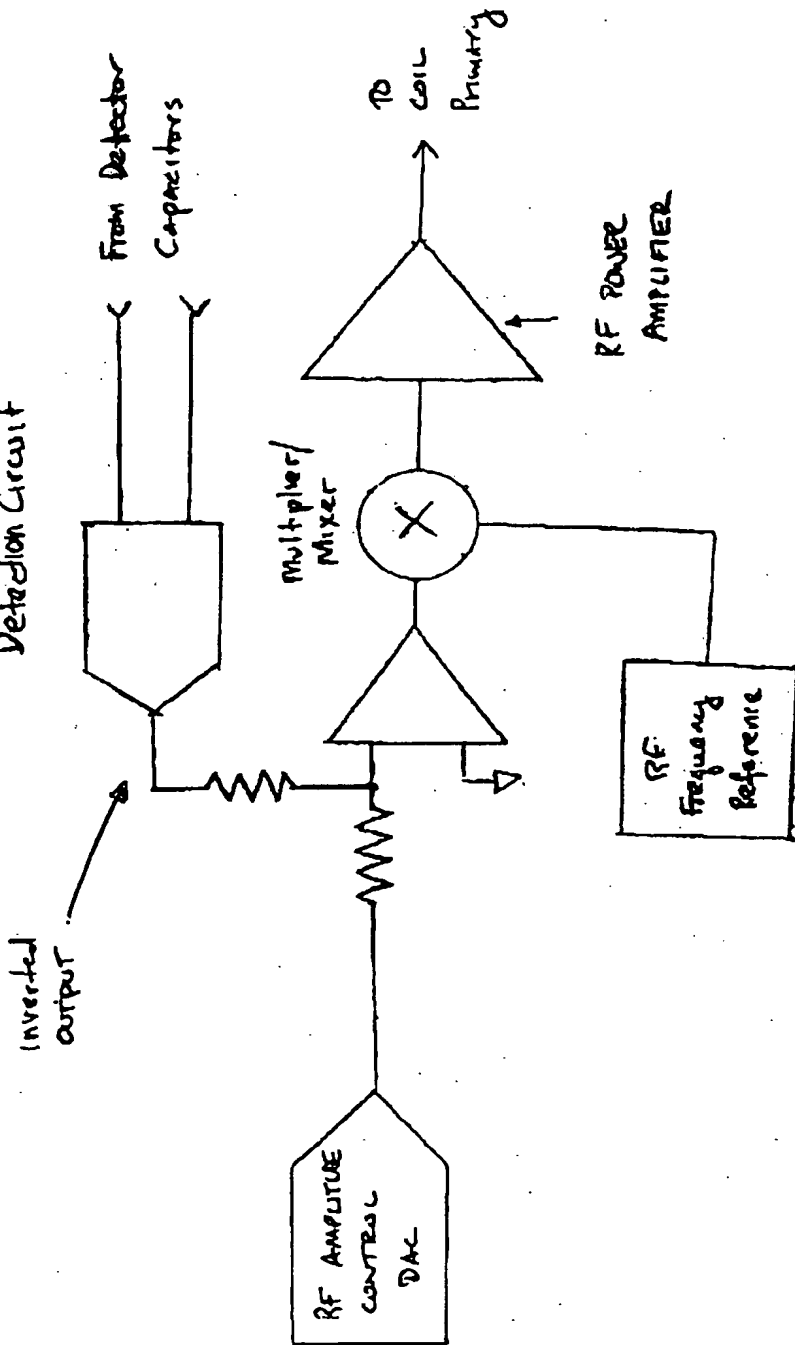
RF AMPLITUDE
CONTROL
DAC

RF
Frequency
Reference

RF POWER
AMPLIFIER

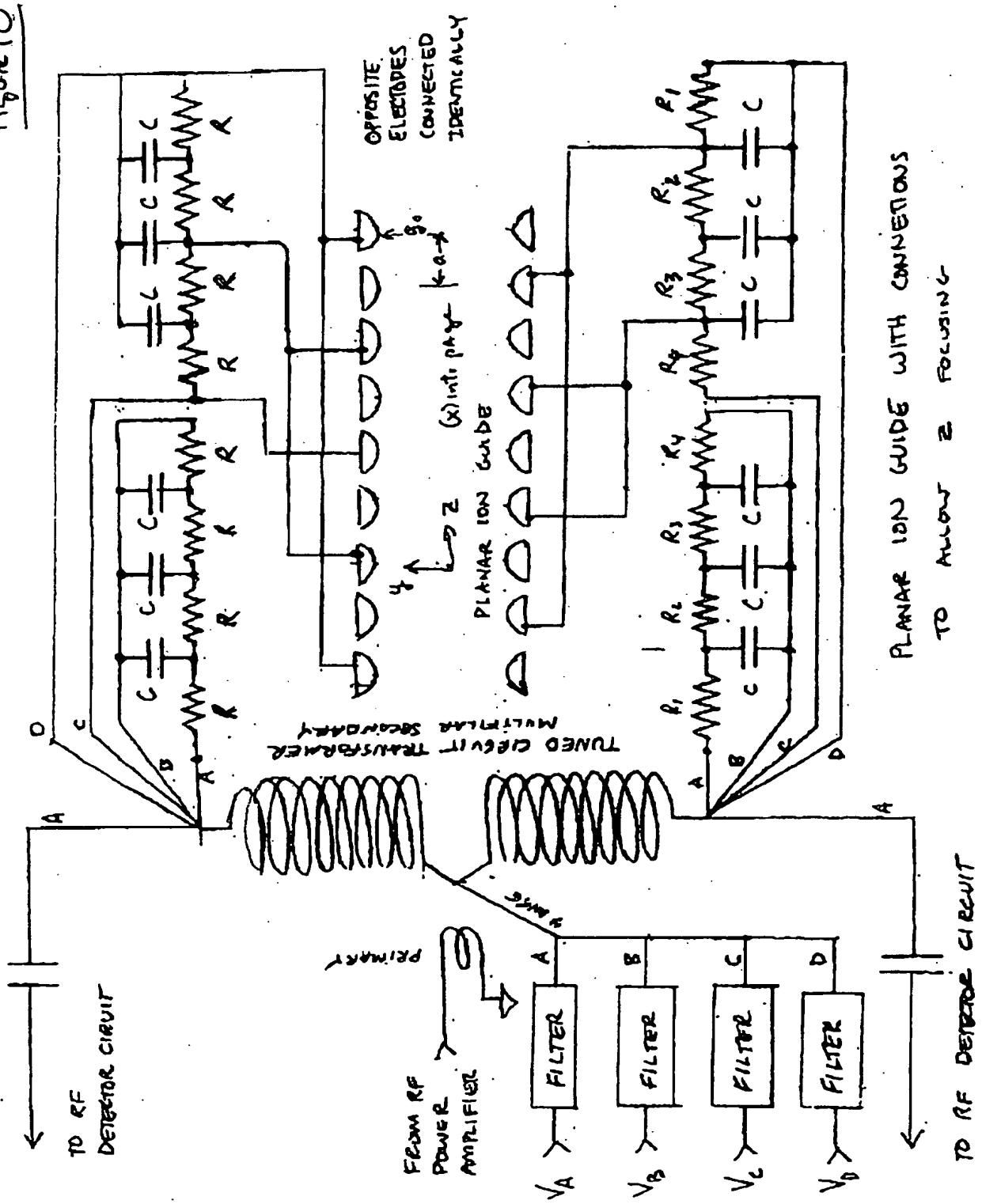
TO
coil
Primary

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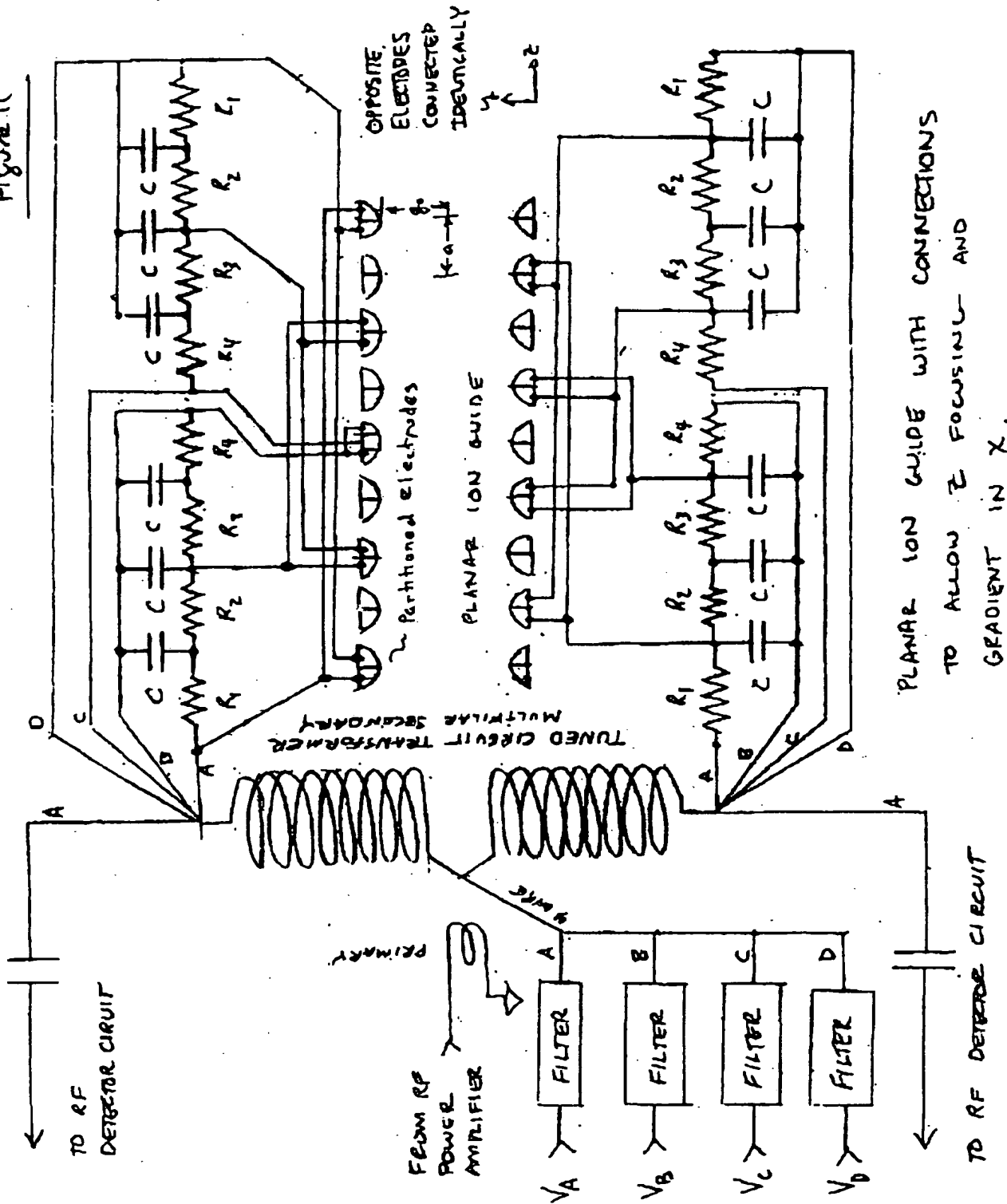
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Figure 10



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Figure 11



PLANAR ION GUIDE WITH CONNECTIONS
TO ALLOW Z FOCUSING- AND
GRADIENT IN X.

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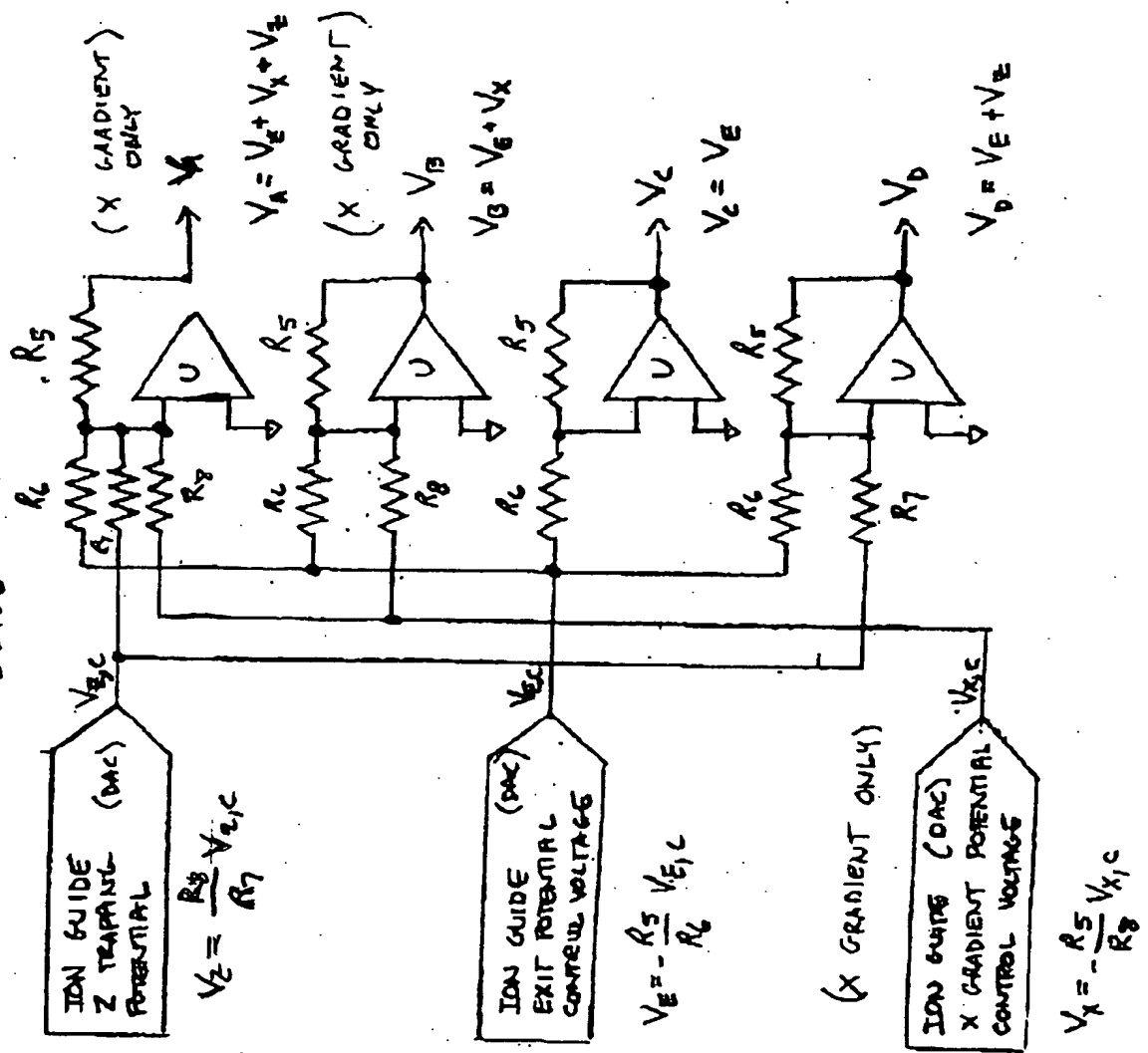
Figure 12

CIRCUITRY TO CREATE NEED DC VOLTAGES FOR PLANAR ION GUIDE

Estimated Voltages

$$V_E = 4 \text{ volts}$$

$$V_X \sim 0.5 \text{ volts or less}$$



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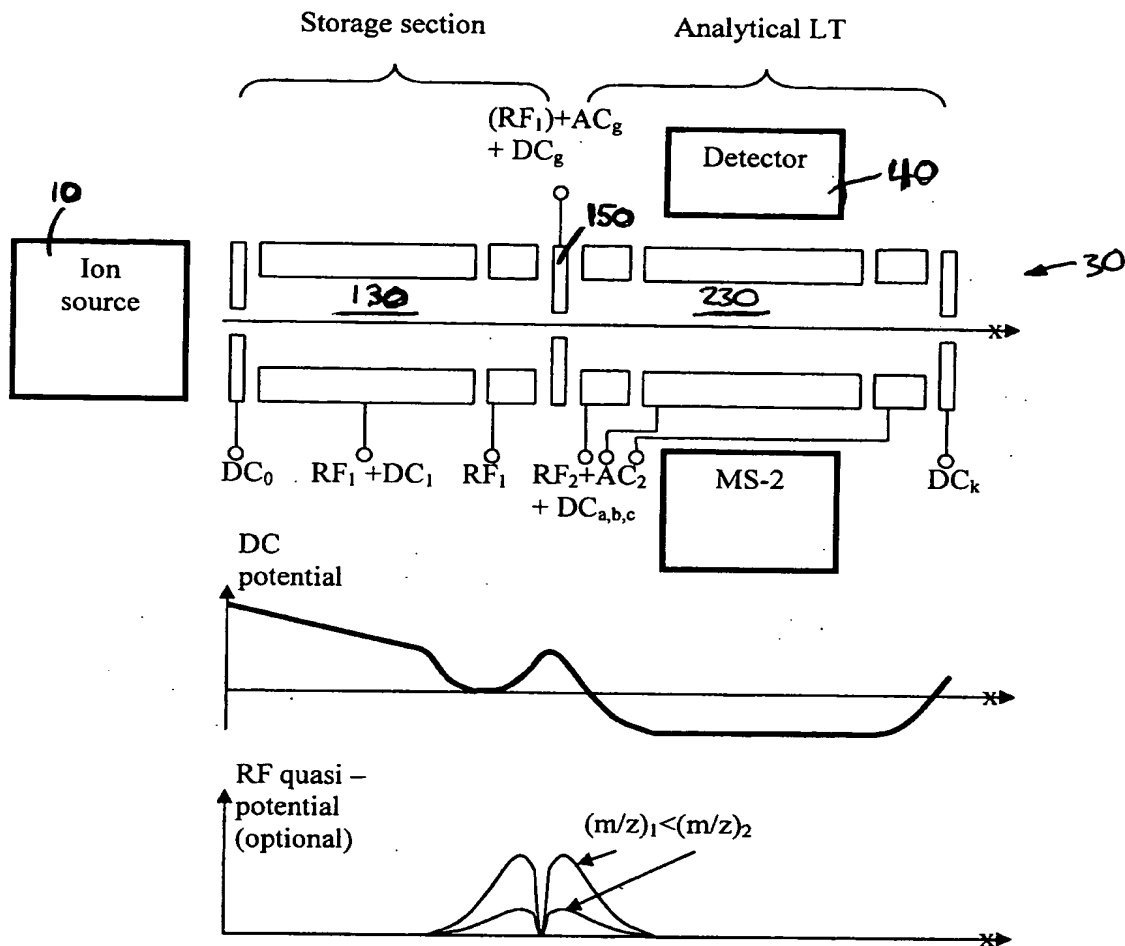


FIGURE 13